

## **Remarks and Arguments**

Claims 1-19 are pending in this application. Claims 1-7 and 9-19 stand rejected. The Office objects to claim 8.

### **35 U.S.C. § 103**

Claims 1-7 and 9-19 stand rejected as allegedly unpatentable under 35 U.S.C. §103 by European Patent No. EP 1,068,901 (hereinafter, "Deguchi") in view of U.S. Patent No. 6,482,304 (hereinafter "Emery").

#### **A. The Prima Facie Case Requirement**

The Patent and Trademark Office (PTO) bears the burden of initially establishing a prima facie case of obviousness. MPEP § 2142. MPEP § 2143 provides the standard required to establish a prima facie case of obviousness. "First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine what the reference teaches. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references combined) must teach or suggest all the claim limitations." The Supreme Court has recently instructed that the analysis of an obviousness finding must be made explicitly part of the record. *KSR International Co. v. Teleflex Inc.* (2007) (Slip Op. at page 4). The Office has not met its burden in this case.

#### **B. Claims 1-7 and 9-19 Are Not Prima Facie Obvious**

According to the Office, Deguchi discloses an electrodeionization device providing a first and second flow path comprising a plurality of alternating depletion and concentration compartments each compartment having a plurality of ion concentration channels capable of allowing the migration of ions into the fluid passing therethrough when a current is generated between said anode and cathode assemblies. The Office believes that each depletion compartment is configured such that fluid brought thereinto flows in to each ion concentration channel substantially sequentially. The Office admits that Deguchi fails to disclose the use of conduits to connect deionization channels, but believes that Emery discloses that conduits are routinely used to connect deionization channels in an electrodeionization unit. Applicants respectfully traverse the rejection.

## **1. The Suggested Combination Provides No Reasonable Expectation of Success**

The conduits allegedly disclosed in Emery would not be successful if used in conjunction with the deionization cells of Deguchi because Deguchi suggests that the lateral flow of water is needed to improve contact efficiency. Deguchi states:

The electrodeionization apparatus of the present invention has desalting compartments, each of which is divided into a plurality of cells by a partition member, and an ion exchanger is filled in the respective cells. At least a part of the partition member facing the cell is inclined relative to a normal flow direction of the water in the desalting compartment. . . Therefore at least a part of the water flowing into the desalting compartment should flow obliquely relative to the normal flow direction of water so that the water is dispersed overall the desalting compartment (Deguchi page 2, paragraph [0012]. (See also paragraph [0036]).

If conduits were provided at the bottom of each of Deguchi's cells (which would always be the case except for the bottom row of cells) the lateral flow of the water would be lost and thus the efficiency suggested by Deguchi (paragraph [009]) would be lost. Accordingly Applicants submit using conduits in the Deguchi apparatus would not be successful and thus the suggested combination is not prima facie obvious. Withdrawal of the rejection is respectfully requested.

## **2. The Combined References Do Not Teach or Suggest Every Claim Element**

Turning to claim 16, Applicants note that claim 16 recites, in part "the average size of the resin beads in the concentration compartments being substantially smaller than the average size of resin beds in the depletion compartments." Applicants have reviewed Deguchi and do not believe that this element is disclosed. Applicants previously requested that the Office point out specifically where Deguchi discloses that the average size of the resin beads in the concentration compartments are substantially smaller than the average size of resin beds in the depletion compartments. To date the Office has not pointed to any passage in Deguchi that discloses this element. Moreover, Emery does nothing to cure this defect. Applicants respectfully request withdrawal of the rejection of claim 16 and its dependencies.

### **Claim Objections**

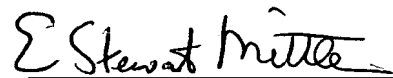
Claim 8 has been found to be free of the art and allowable if rewritten in independent form incorporating all the limitations of the base claim. In view of the comments submitted above Applicants believe that this objection is now moot.

### **CONCLUSION**

In view of the foregoing remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account.

Respectfully submitted



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